Lower Columbia Estuary Partnership Lesson and NGSS Connections

• = supported by lesson

Lesson/Section:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Title:	All About Beavers	Native and Invasive Species	Native American Plant Use	Intro to Plant Identification	Intro to Macroinvertebrates	Macroinvertebrate Adaptations	Macros as Water Quality Indicators	Bird Beak Buffett	Bird Adaptations	Intro to Local Bird Identification	Explore Your Watershed	What is a Watershed	Stream Table	Water Quality	Animal Signs and Observations	Fish Dissection	Salmon Life Cycle	Food Webs	Ecosystem Interactions	Intro to Animal Tracks	Stormwater Runoff	Ocean Acidification

Next Generation Science Standards

2nd Grade

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
2-LS4-1: Make observations of plants and animals to compare the diversity of life in different habitats.	•								•													

3-5 Grade Engineering

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
3-5-ETS1-2: Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.													•									

3rd Grade

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
3-LS1-1: Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.						•																

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3-LS3-1: Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.									•											•		
3-LS4-2: Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.								•	•													
3-LS4-3: Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.								•														
3-LS4-4: Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.											•											•
4th Grade																						
4-ESS2-1: Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.													•									
4-ESS3-1: Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.																						•

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4-LS1-1: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	•	•	•	•	•	•		•	•	•	•				•	•	•					
5th Grade																						
5-ESS2-1: Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.													•								•	•
5-ESS2-2: Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.																					•	
5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.		•					•				•	•	•	•								
5-LS1-1: Support an argument that plants get the materials they need for growth chiefly from air and water.																		•				
5-LS2-1: Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.																•	•	•				
5-PS1-1: Develop a model to describe that matter is made of particles too small to be seen.																						•
5-PS3-1: Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.																		•				

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Middle School																						
MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.							•						•									
MS-ETS1-2: Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.													•									
MS-LS1-4: Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.																	•					
MS-LS2-1: Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.		•																	•			
MS-LS2-4: Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.							•						•				•					
MS-LS2-5: Evaluate competing design solutions for maintaining biodiversity and ecosystem services.											•											